

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 2, 4-16, and 18-30 are presently pending in this case. Claims 1, 4, 15, 18, 29, and 30 are amended and Claims 3 and 17 are canceled without prejudice or disclaimer by the present amendment. As amended Claims 1, 4, 15, 18, 29, and 30 are supported by the original claims, no new matter is added.

In the outstanding Official Action, Claim 29 was rejected under 35 U.S.C. §101; Claims 1-6, 11-20, and 25-29 were rejected under 35 U.S.C. §103(a) as unpatentable over Sekine et al. (U.S. Patent No. 6,101,188, hereinafter "Sekine") in view of Naghian et al. (U.S. Patent Application Publication No. 20030235175, hereinafter "Naghian"); Claims 7-10, 21-24, and 30 were rejected under 35 U.S.C. §103(a) as unpatentable over Naghian in view of Sekine.

With regard to the rejection of Claim 29 under 35 U.S.C. §101, Claims 29 and 30 are amended to recite a computer readable storage medium, which is an article of manufacture. Accordingly, Claims 29 and 30 are in compliance with all requirements under 35 U.S.C. §101.

With regard to the rejection of Claims 1, 11, 15, 25, and 29 as unpatentable over Sekine in view of Naghian, that rejection is respectfully traversed.

Amended Claim 1 recites in part:

a plurality of data input/output ports;
means for storing a MAC learning table in which a
MAC address of data for forwarding is associated with an
output port; and
a control section for updating said MAC learning table,
wherein said control section is configured to set, for a
mobile node, in said MAC learning table, a plurality of entries
associating different output ports with a MAC address of said
mobile node, and output data addressed to said MAC address
of said mobile node received via said network, to said plurality

of output ports in parallel, based on said plurality of entries set in said MAC learning table, and

said control section is configured to set an entry in said MAC learning table as an additional entry based on a MAC address of a next access point contained in a handover start message received from said mobile node, wherein said additional entry sets a port to which said next access point is connected, as an output port corresponding to said MAC address of said mobile node, and output said data addressed to said MAC address of said mobile node received via said network *in parallel*, to said output ports listed in said plurality of entries as to said MAC address of said mobile node set in said MAC learning table, wherein said output ports are a plurality of ports to which a current access point and said next access point of said mobile node are connected.

In the system of recited in amended Claim 1, a mobile node transmits a handover start message containing address information of a destination access point to a control section *before performing a handover*. The control section adds an entry to a MAC learning table based on the address contained in the message, and also forwards packets addressed to the mobile node to a current access point of the mobile node as well as to its destination access point *in parallel* based on the entries in the MAC learning table. As a result, the mobile node can receive data packets at once upon connection to the new access point after having performed a handover. Thus, high-speed handovers can be supported.

The outstanding Office Action cited Sekine as describing “a control section” as recited in Claims 1 and 3, and cited Naghian as describing “a mobile node” and “an access point.” In this regard, the outstanding Office Action asserted that LAN controlling means 1 of Sekine outputs data addressed to the MAC address of the mobile node to the ports (which includes (1) the current port and (2) the port which is assigned to the mobile node after having performed handover) in parallel.¹ However, it is respectfully submitted that Sekine does not disclose the above feature. Instead, it is respectfully submitted that Sekine only describes transferring data addressed to a MAC address of a mobile node to a destination

¹See the outstanding Office Action at page 3, lines 5-13.

address *or* to a broadcast address. Thus, Sekine does not teach or suggest a “control section” as defined in amended Claim 1.

Further, it is respectfully submitted that Naghian does not teach a “mobile node” as defined in amended Claim 1. In this regard, Naghian describes a system including a Mobile IP network 100. In a Mobile IP network, the care-of address is assigned when the mobile node moved from the current network to the next network, and it is *not* assigned *before* moving. Accordingly, the home agent can not transfer data addressed to the home address of the mobile node to the care-of address during assigning the care-of address. Namely, the mobile node can not receive data addressed to the home address seamlessly when the node moves to the new network. Further, in a Mobile IP network, data addressed to the home address are not transmitted to both of the home address *and* the care-of address. Thus, it is respectfully submitted that Naghian does not teach a “mobile node” as defined in amended Claim 1.

Thus, as Sekine and Naghian do not teach or suggest all of the elements of amended Claim 1, Claim 1 (and Claims 2 and 4-6 dependent therefrom) is patentable over Sekine in view of Naghian.

Claim 11 recites in part:

said communication terminal apparatus is configured to acquire a MAC address of a next access point to which said communication terminal apparatus is scheduled to be connected next, and broadcast a handover start message containing said MAC address of said acquired next access point;

said data forwarding controller is configured to set an entry in a MAC learning table as an additional entry based on said MAC address of said next access point contained in said handover start message received from said communication terminal apparatus, wherein said entry sets a port to which said next access point is connected, as an output port corresponding to a MAC address of said communication terminal apparatus; and

output data addressed to said MAC address of said communication terminal apparatus received via said network,

in parallel to output ports listed in a plurality of entries as to said MAC address of said communication terminal apparatus set in said MAC learning table, wherein said output ports are a plurality of ports to which a current access point and said next access point of said communication terminal apparatus are connected.

As noted above, Sekine does not teach or suggest any element configured to output data addressed to a MAC address of a communication terminal apparatus received via a network, *in parallel* to output ports listed in a plurality of entries as to the MAC address of the communication terminal apparatus set in a MAC learning table. Thus, Sekine does not teach or suggest “a data forwarding controller” as defined in Claim 11. Further, Naghian does not teach or suggest any communication terminal apparatus configured to acquire a MAC address of a next access point to which the communication terminal apparatus is scheduled to be connected next, and broadcast a handover start message containing the MAC address of the acquired next access point. Therefore, Naghian does not teach or suggest “a communication terminal apparatus” as defined in Claim 11. Consequently, as Sekine and Naghian do not teach or suggest all of the elements of Claim 11, Claim 11 (and Claims 12-14 dependent therefrom) is patentable over Sekine in view of Naghian.

Amended Claim 15 recites in part:

(a) setting, for a mobile node, in a MAC learning table in which a MAC address of data for forwarding is associated with an output port, a plurality of entries associating different output ports with a MAC address of said mobile node; and
(b) outputting data addressed to said MAC address of said mobile node received via said network, to said plurality of output ports *in parallel* based on said plurality of entries set in said MAC learning table,
wherein said step (a) comprises ***setting an entry in said MAC learning table as an additional entry based on a MAC address of a next access point contained in a handover start message received from said mobile node***, wherein said additional entry sets a port to which said next access point is connected, as an output port corresponding to said MAC address of said mobile node; and said step (b) comprises ***outputting said data addressed to said MAC address of said mobile node received via said network, in parallel to said***

output ports listed in said plurality of entries as to said MAC address of said mobile node set in said MAC learning table, wherein said output ports are a plurality of ports to which a current access point and said next access point of said mobile node are connected.

As noted above, Sekine does not teach or suggest outputting data addressed to a MAC address of a mobile node received via a network, ***in parallel*** to output ports listed in a plurality of entries as to the MAC address of the mobile node set in a MAC learning table. Thus, Sekine does not teach or suggest “outputting data” as defined in amended Claim 15. Further, Naghian does not teach or suggest setting an entry in a MAC learning table as an additional entry based on a MAC address of a next access point contained in a handover start message received from a mobile node. Therefore, Naghian does not teach or suggest “setting” as defined in Claim 15. Consequently, as Sekine and Naghian do not teach or suggest all of the elements of Claim 15, Claim 15 (and Claims 16-20 dependent therefrom) is patentable over Sekine in view of Naghian. Further, as Claim 29 recites similar elements to Claim 15, Claim 29 is patentable over Sekine in view of Naghian for at least the same reasons.

Claim 25 recites in part:

said communication terminal apparatus acquires a MAC address of a next access point to which said communication terminal apparatus is scheduled to be connected next, and broadcasts a handover start message containing said MAC address of said acquired next access point;

said data forwarding controller sets an entry in a MAC learning table as an additional entry based on said MAC address of said next access point contained in said handover start message received from said communication terminal apparatus, wherein said additional entry sets a port to which said next access point is connected, as an output port corresponding to a MAC address of said communication terminal apparatus; and

outputs data addressed to said MAC address of said communication terminal apparatus received via said network, in parallel to output ports listed in a plurality of entries as to said MAC address of said communication terminal apparatus

set in said MAC learning table, wherein said output ports are a plurality of ports to which a current access point and said next access point of said communication terminal apparatus are connected.

As noted above, Sekine does not teach or suggest outputting data addressed to a MAC address of a mobile node received via a network, *in parallel* to output ports listed in a plurality of entries as to the MAC address of the mobile node set in a MAC learning table. Thus, Sekine does not teach or suggest “said data forwarding controller ... outputs data” as defined in Claim 25. Further, Naghian does not teach or suggest a communication terminal apparatus acquiring a MAC address of a next access point to which the communication terminal apparatus is scheduled to be connected next, and broadcasts a handover start message containing the MAC address of the acquired next access point. Therefore, Naghian does not teach or suggest “said communication terminal apparatus acquires a MAC address” as defined in Claim 25. Consequently, as Sekine and Naghian do not teach or suggest all of the elements of Claim 25, Claim 25 (and Claims 26-28 dependent therefrom) is patentable over Sekine in view of Naghian.

With regard to the rejection of Claims 7, 21, and 30 as unpatentable over Naghian in view of Sekine, that rejection is respectfully traversed.

Claim 7 recites:

A communication terminal apparatus of a mobile type which performs data transmission/reception via a network and which changes access points based on data receiving conditions, wherein *said communication terminal apparatus is configured to acquire a MAC address of a next access point to which said communication terminal apparatus is scheduled to be connected next, and broadcast a handover start message containing said acquired MAC address of said next access point, and perform a handover process on condition that said communication terminal apparatus receives a handover setting completion message from a data forwarding controller as a response to said handover start message.*

As noted above, Naghian does not teach or suggest a communication terminal apparatus configured to acquire a MAC address of a next access point to which the communication terminal apparatus is scheduled to be connected next, and broadcasts a handover start message containing the MAC address of the acquired next access point. Further, as Naghian does not teach or suggest a mobile node transmits a handover start message containing address information of a destination access point to a control section ***before performing a handover***, Naghian does not teach or suggest a communication terminal apparatus configured to perform a handover process on condition that said communication terminal apparatus receives a handover setting completion message from a data forwarding controller as a response to said handover start message. Therefore, Naghian does not teach or suggest “a communication terminal apparatus” as defined in Claim 7. Further, it is respectfully submitted that Sekine does not teach or suggest any of these elements either. Consequently, as Sekine and Naghian do not teach or suggest all of the elements of Claim 7, Claim 7 (and Claims 8-10 dependent therefrom) is patentable over Naghian in view of Sekine.

Claims 21 and 30 recite in part:

acquiring a MAC address of a next access point to which said communication terminal apparatus is scheduled to be connected next;
broadcasting a handover start message containing said acquired MAC address of said next access point; and
performing said handover process ***on condition*** that a handover setting completion message is received from a data forwarding controller as a response to said handover start message.

As noted above, Naghian does not teach or suggest a mobile node transmits a handover start message containing address information of a destination access point to a control section ***before performing a handover***. Therefore, Naghian does not teach or suggest “acquiring,” “broadcasting,” and “performing” as recited in Claims 21 and 30. Further, it is

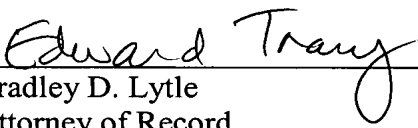
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respectfully submitted that Sekine does not teach or suggest any of these elements either.
Consequently, as Sekine and Naghian do not teach or suggest all of the elements of Claims 21 or 30, Claims 21 and 30 (and Claims 22-24 dependent therefrom) are patentable over Naghian in view of Sekine.

Accordingly, the pending claims are believed to be in condition for formal allowance.
An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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